



PRODUCT PORTFOLIO EMEA



**INJECTION | MASSAGING | BRINE PREPARATION | PORTIONING | FLATTENING | TENDERIZING
GRINDING & MIXING | FORMING | COATING | FRYING | COOKING | SEARING | GRILLING
PROOFING | CHILLING | FREEZING | PASTEURIZATION | STEAMING TECHNOLOGY
HIGH PRESSURE PROCESSING | TRAY SEALING TECHNOLOGY**

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Patented technologies for every stage of the food processing chain

JBT supplies technology solutions for the global food industry, offering integrated solutions across the entire food processing continuum, from meat, seafood and poultry, to fruit and vegetables, baked goods, and convenience foods.

We can provide you with flexible, customised solutions for injection, massaging, brine preparation, portioning, flattening, cordon bleu slicer, grinding, mixing, forming, coating, frying, cooking, baking, chilling, freezing and pasteurization that run like clockwork, deliver maximum uptime, match your toughest hygiene demands and make your processing profitable.

Our range of food processing technologies includes the **Schröder™** injection, massaging and brine preparation systems, **DSI™** portioning systems, **Stein®** coating and frying equipment, the **Double D®** range of impingement cookers and searer/grill-markers, **Formcook®** contact and combi cookers, and the world-leading **Frigoscandia®** freezer systems, which have been leading the way in freezing technology for over 50 years. More solutions from JBT are **FTNON** Specialists in Fresh Cut and Thermal Food Processing, **AVURE** High pressure processing (HPP) systems, **Proseal** Environmentally-friendly Packaging Systems, **alco** includes, meat grinder, flattening machine, cordon bleu slicer, dippers, flouring as well as dry seasoning systems, forming machines, frying systems, spiral freezer, spiral coolers, coating systems, linear and spiral hot air ovens.

In this brochure you will find information on the complete JBT cooking and freezing portfolio, with at-a-glance information, application options and detailed specifications to help you identify the best equipment to meet your requirements. All JBT equipment in this brochure can be provided as stand-alone, or as part of a fully integrated in-line production process.

We stand by the reliability and payback of our products and invite you to test our equipment at our Food Technology Centres in Helsingborg in Sweden, and near Edinburgh in the UK. Here, you can simulate production, conduct research, train your technicians, or preview the latest processing equipment with the supervision of a trained technical team.

To find out more, talk to your local JBT representative or email: info-europe@jbt.com



We're with you, right down the line.™



Injection, Massaging, Brine preparation



Schröder Marination Technology

Injection technology

The processing principle of the IMAX technology is based on classic injection curing by means of hollow needles. This is where knowledge regarding needle type, inlet and exit holes and needle stitch pattern plays a decisive role. The brine/emulsion to be injected is carried directly to the product by a system of pumps and pipes.

Pork, beef, boneless products, bone-in meat, poultry and fish can be injected.



Massaging technology

The operating principle of MAX technology is based on the horizontal mounting of a rotating paddle shaft in the fixed container. The massage effect is achieved by the spirally arranged paddles. They work directly in the meat mass and thus bring the mass energy directly to the muscle. The specific paddle positions generate a horizontal and vertical flow of material within the tank. This results in a uniform and effective massaging action, which is additionally supported and accelerated by the high degree of filling of the system



Brine preparation

BRIMAX technology allows the production of all types of brine used in injection, massaging and/or tumbling procedures, whilst maintaining a standardised product quality under the most stringent hygiene requirements. A unique feature is the software, which has been developed and refined using years of experience, that performs, controls and documents the entire system, as the operator.



Each machine from Schröder is designed to provide the optimal solution for its individual task. At the same time, they are also designed to function as modules. Integrated solutions with high degrees of automation require adaptability and connectivity from each individual machine. Intelligent networking capability. These aspects are an integral part of each of our modules. The machines are controlled and monitored by VISMAYpro, the in-house SCHRÖDER software, which can also be connected to ERP systems such as SAP. The systems are designed individually, and fulfil increasing customer demands for complex production lines.

Injection

Schröder IMAX

A new benchmark in injection technology. What sets us apart is our knowledge of the perfect combination of components. Whether manifolds, injection needles, pumps or brine feeds – each component is researched in detail, designed and coordinated to work seamlessly together. In conjunction with intelligent electronics, this combination guarantees the following:

- High levels of performance and precise injection accuracy
- Optimal brine distribution in the product
- High product yields
- Optimal adaptation to recipes and products
- Flexible configuration for process and production conditions

Options:

- Tenderizer head
- Meat-in Meat injection (HVB)
- Integration in process visualization software VISMAX
- In-line weighing



Massaging

Schröder MAX

Massage technology for increased productivity. This is the key to higher water retention and a higher yield at the slicer through better slice cohesion. Available sizes from 600 kg up to 6.000 kg. Thanks to active massaging of the meat using special paddles, Schröder MAX technology allows the following in an extremely short period of time.

- Intra- and extramuscular protein activation
- Significantly improved water retention
- Active incorporation of brine in an extremely short time
- Efficient utilisation of drum capacity
- Up to 50% process time saving
- Up to 85% load capacity

Options:

- Different paddle styles for softer/harder treatment
- Integrated weighing system
- Automatic lubrication
- FlowMAX automatic discharging system



Brine preparation

Schröder BRIMAX



Special brine preparation system for mixing, cooling and holding the brine for the marination process.

The thorough preparation of brine is a critical part of the overall injection and processing concept. This is much more than simple mixing. Electronically controlled and monitored processes, individually configured recipe programs, effective cooling and independent additive intake guarantee the following:

- Standardization of brine making process
- Swift insertion of additives
- Homogenous mixing process
- Repeat accuracy for recipes
- Effective cooling

Options:

- Agitator
- Shear pump for difficult soluble additives, such as potato starch, vegetable proteins etc. and reduces the mixing times of all brines
- Cleaning nozzles
- Pipe-heat exchanger for heavy brines



Component	Description	Set weight (kg)	Act weight (kg)
1	Fresh water	750,000	
2	Salz	100,000	
3	Laktat	50,000	
4	Phosphat	20,000	
5			
6			
7			
8			

Target total weight	Target actual weight	Component target weight	Component actual weight	Component residual weight
1000,0 kg	0,0 kg	0,000 kg	0,000 kg	0,000 kg



A white ceramic ramekin with vertical ridges is filled with a smooth, vibrant red sauce. In the foreground, three golden-brown, breaded chicken tenders are arranged on a dark, textured surface. A small green herb leaf is tucked behind the tenders. The background is dark and out of focus.

Portioning Systems

Portioning Systems



DSI™ 800 S Series Portioning System

The 8 cutter Portioning System from DSI delivers groundbreaking functionality and versatility in a compact, cost-effective and easy-to-use package.

Designed for:

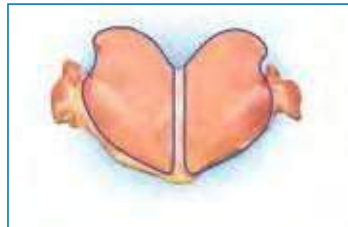
High volume portioning; a precision machine for intense, high-accuracy cuts, using a new generation scanner for effortless all-in-one fat trimming.

Key features:

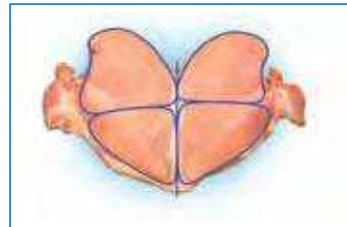
- High yield
- Reduced labour
- More throughput
- Matches your product mix and orders on any given day

Applications:

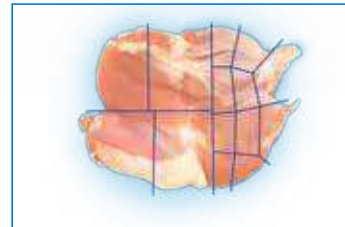
- Whole muscle chicken strips and tenders
- Nuggets and double-weight portions
- Chicken thigh meat chunks/portions
- "Perfect" fat-free retail portions
- QSR specific portions
- Red meat fat trimming and portioning
- Pork belly trimming
- Fish portioning
- Baked goods (pizza, pies etc.)



Fat trim



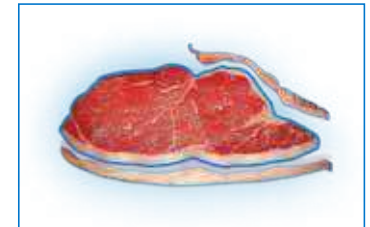
*4 portions per whole breast
(Shape it with "bun" coverage control)*



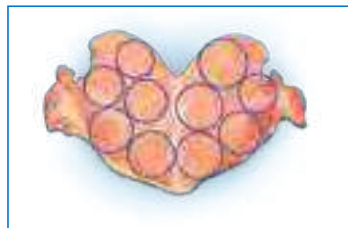
Thigh steaks with shots



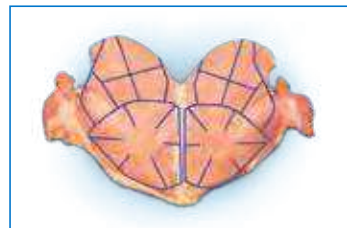
Mini strips with portion



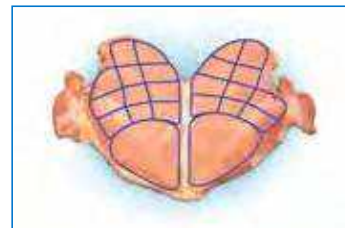
Sirloin fat trim, both sides



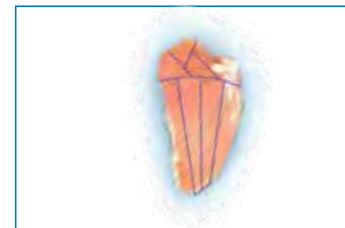
Medallion cut



Magnolia blossom cut



*Tail portions with
fat-trimmed nuggets*



Half-breast strips with nuggets



Pork belly trimming

Portioning Systems

DSI™ CT 32 Consistent Thickness Slicer™

Produce more high-quality pounds per day with less maintenance effort and lower water use with the new DSI CT 32 Consistent Thickness Slicer. Maximize output with continuous blade movement and high-speed belts. Achieve smooth cuts and superior cut quality every time with a continuously moving blade. The compliant hold-down system eliminates high compression while slicing to reduce variations in product spring back. This results in more consistent thickness, smoother cuts, thicker tails, less product slope and higher portioning yields.

Designed for:

Simple linear poultry portioning applications; a perfect solution for plants that may have water, noise or electrical power restrictions.

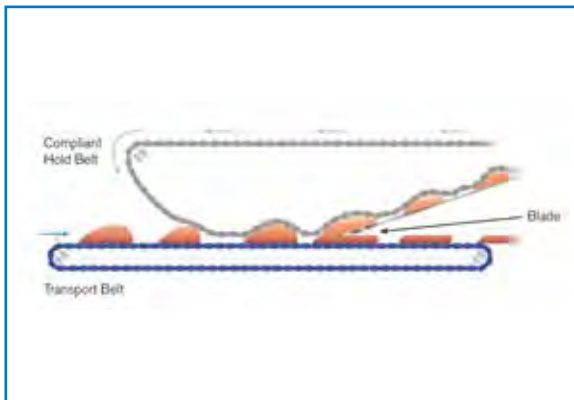
Key features:

- High-speed, continuously-moving blade allows the slicer to be integrated seamlessly into automated lines
- Simple, mechanical adjustment to change slice thickness in seconds during operation
- Minimize water consumption of 0.9 gallon/minute (3.3 liter/minute)

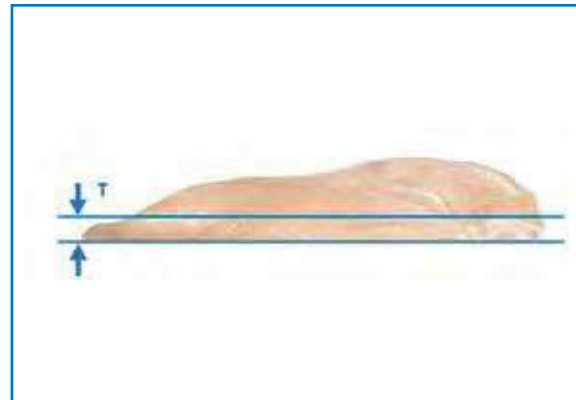
- Patented compliant hold-down system* achieves superior results on highly variable incoming product thickness
- Improves consistency of slice thickness up to 30% compared to a typical slicer
- No need to sort product upstream – compliant hold-down system achieves superior results for highly variable incoming product size
- Easy transition from slicing to portioning
Designed to promote easy sanitation
- Simple switch from top slice removal to slit-and-slide

Applications:

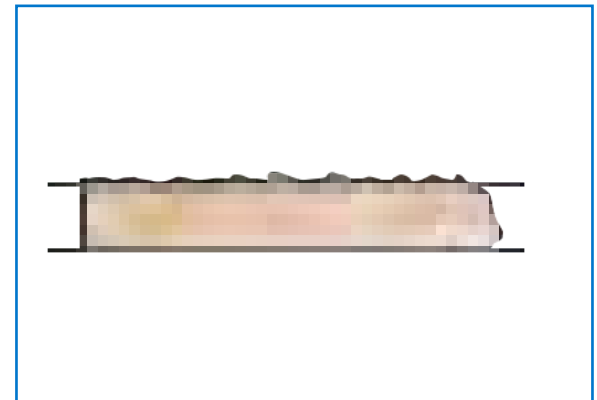
- Poultry



**Patented Hold down system*



Thickness control



Carcass side clean-up



Flattening

alco Flattening

A perfectly flattened schnitzel is characterized by an enlarged surface and standardized, homogeneous product thickness. Our flattening machine guarantees just that! Fresh and frozen products also keep their succulence in the subsequent cooking process thanks to our flattener. Schnitzel, gyros, etc. are run over an upper and lower belt through the flattening area, where a number of roller pairs press and stretch the meat in turns. The desired product thickness can be defined in advance by hand through a height adjustment.



alco Flattening Machine, ASP

Flattens and rolls out fresh & soft frozen products

Designed for:

Enlarged surface and standardized, homogeneous product thickness for reduced cooking times, less food waste and an improved tenderness.

Key features:

- Flattening area with a number of roller pairs for gentle and permanent flattening without memory effect
- Height adjustment through a handwheel for setting the desired product thickness between 4 – 45 mm
- Rubberized drive rollers prevent belt slipping
- Water spray bar for preventing protein build up on the belt
- Perfect product transfer through a pivotable outlet belt

- Continuously adjustable production speed

Options:

- Special belts, optimally adjust to the product through various belts.
- Extended infeed area additional space in infeed area to put products down.
- Spindle height adjustment, sets the height of the entire machine by means of a handwheel.



Tenderizing & Cordon-Bleu-Slicer

alco Tenderizer, ASC



The tenderizer applies small incisions to products.

Designed for:

Marinated steaks, schnitzel, cube steaks, burger patties

Key features:

- Gap between knife rollers adjustable in terms of height to set cutting depth
- Particularly high frequency of the incisions possible through a reduced gap between the blades or special tothing of the blades
- Perfect product transfer through a pivotable outlet belt
- Optional Cuber-Insert for perforating shaped meat products like burgers
- Continuously adjustable production speed
- High operating safety

- Collection tray for product residues
- Can be driven on four heavy-load steering rollers and rotated 360°, with parking brake and height adjustment

Options:

- Reduced blade gap and special tothing
Raises the frequency of the incisions through the smaller gap of the toothed disc blades with finer teeth and a smaller tooth gap.
- Extended outlet belt
Additional conveyor line for gentle transfer to subsequent plants.
- Spindle height adjustment
Sets the height of the entire machine by means of a handwheel.
- Perforation reel
Perforates formed meat products like hamburgers

alco Cordon-Bleu-Slicer, ACB



The Cordon-Bleu-Slicer cuts products sideways. Its special blades can be individually adjusted to the product in terms of height and cutting depth.

Designed for:

Cordon bleu, kiev cutlets, butterfly steaks, grilled pockets, soft rolls.

Key features:

- Adjustable height and cutting depth of knives with PTFE coating
- Non-slip product transport thanks to special straps
- Belt tensioning unit with quick tensioning system for easier cleaning
- Easy-to-clean design, to be cleaned without auxiliary tools
- Perfect product transfer through a pivotable outlet belt

Options:

- Special belts
Belts with special profiling that are adjusted for special requirements.
- Spindle height adjustment
Machine height adjustment by means of a handwheel without the use of tools.

A stainless steel bowl filled with finely ground, pink shrimp. The background features a dark, textured surface with fresh ingredients including shallots, rosemary, and green leaves. A semi-transparent white banner is overlaid across the middle of the image.

Grinding & Mixing



alco Grinder, AMG

Dual-screw system for efficient processing.

Designed for:

Grinding fresh meat, frozen meat, vegetable, fish, and cheese blocks, and much more.

Key features:

- Dual-spiral system for optimal processing in just one step
- Innovative cutting technology for the best results
- Maximal product protection thanks to a pre-cutting support
- High-quality end products thanks to different separating mechanisms
- Continuously adjustable spiral speed
- Intuitive operation through a touch panel with recipe management

Options:

- Pre-cutting support, frees up the cutting set and reduces wear and tear.
- Separator, removes unwanted by-products like tendons, gristles, etc.
- Level sensor for the funnel, automatically shuts the grinder off as dry-run protection.



alco Mixer, AMP

Double-Shaft Paddle mixer.

Designed for:

Mixing meat mixtures, gourmet salads, mixed vegetables

Key features:

- Two Sophisticated, robust paddle shafts for optimal mixing of even the most challenging products
- Rotation direction of the shafts can be changed in cycles for excellent mixing performance
- Insulated walls and monitoring of the product temperature
- Outstanding range of different equipment options for numerous types of processes
- Rapid cooling of products through optional vacuum cooling or cryogenic gas

Options:

- Cryo-injection, cools the product mass by injecting cryo-media like CO₂ or nitrogen.
- Vacuum chamber, for optimal protein processing or for prevention of gas inclusions in the product
- Weighing technology
Possible use of the mixer as a batch scale.
- Direct steam injection, heats the product mass especially quickly and efficiently.



Forming

alco Forming systems



alco Forming Machine, AFM

High-pressure forming machine

Designed for:

Forming burgers, meatballs, Schnitzel, nuggets, fish sticks, vegetarian and vegan meat substitutes into attractive 2 or 3D shapes.

Key features:

- High performance filling system, develops up to 80 bars of pressing power (optionally with an air ejector)
- Suitable for forming masses of various viscosity, from pasty to coarse
- Cost-saving, individually designable molds
- Weight-accurate portioning via a molds system
- Continuously adjustable production speed
- Intuitive operation through a touch panel with recipe management.

Options:

- 2D/2.5D/3D forming plate set, forms the top and bottom of the product over a forming plate with an individually selectable product form.
- Air assisted ejectors, Are equipped with air nozzles, thereby allowing for reliable and yet gentle ejection, even ejecting light or sticky products from the forming plate.
- Bridge breaker incl. a reinforced funnel attachment pneumatically drives the breaker wave for very tough masses and ensures continuous feed of the mass into the spirals.
- Ball roller unit special conveyor system in order to transform cylindrical products into balls.
- Cleaning cart, Allows all loose attachments of the machine to be stored, fixed and given a simple cleaning.

alco Forming Machine, AFM PRO

High-pressure forming machine

Designed for:

The further developed forming machine PRO is characterized in particular by high flexibility and high production speed. The AFM PRO is ideally suitable for processing large quantities of different product masses in individually designable shapes.

Key features:

- Forming and portioning of product mass 30% faster with 70 strokes per minute
- Quickly changeable, custom-designed moulds in 2, 2.5 or 3 dimensions
- Improved hygienic design
- Optimized maintenance hatches, sealing systems and relocation of individual components
- Easier accessibility, cleaning and maintenance

Options:

- 2D/2.5D/3D forming plate set, forms the top and bottom of the product over a forming plate with an individually selectable product form.
- Air assisted ejectors, Are equipped with air nozzles, thereby allowing for reliable and yet gentle ejection, even ejecting light or sticky products from the forming plate.
- Bridge breaker incl. a reinforced funnel attachment pneumatically drives the breaker wave for very tough masses and ensures continuous feed of the mass into the spirals.
- Ball roller unit special conveyor system in order to transform cylindrical products into balls.
- Cleaning cart, Allows all loose attachments of the machine to be stored, fixed and given a simple cleaning.



A close-up photograph of several pieces of golden-brown, fried chicken, including a drumstick and a thigh, resting on a bed of fresh green and red leafy salad. The background is a plain, light color.

Coating Systems

JBT high performance coating systems

From the inventor of coating equipment

Our coating systems have led the food processing industry in innovation since the first commercially successful breading applicator was introduced in 1955. Since then food processors have relied on JBT's coating equipment to develop and grow their coated products offerings. Our coating equipment has been a key component of many multi-national fast food and convenience food new product introductions since the early 1980's. From the first machine introduced in 1955, JBT's coating machines have provided high capacity, extremely reliable, and innovative solutions to food processors world-wide.

The main features and benefits of the JBT coating systems are:

Quality



Flexibility



Consistency



JBT offers a wide selection of specialised batter and breading applicators in a variety of sizes to meet virtually any application or capacity requirement.

Coating Systems



Stein® TM-3 and TM-4 Tempura Batter Mixer

Semi-automated batch-style batter mixer.

Designed for:

Mixing highly leavened and viscous tempura-style batters and delivering mixed batter to tempura-style batter applicators.

Key features:

- Gentle mixing action
- Adjustable speed orbiting/rotating cage-style mixer
- 120 L water tank with automatic and adjustable water feed to maintain dry mix/water ratio
- Dry mix hopper 1 or 2 bags (25 kg - 50 kg) with automatic dry mix feed
- 17 kW refrigeration mix-tank with cooling jacket and automatic positive displacement batter feed pump
- Batter applicator level probes

TM-3

- Hydraulic drives
- Push button controls

Options:

- Electric drives
- PLC controls



also Dipper, ADT

Applies different heavy liquid coating materials to the top and bottom of your product for high volume consistent processing

Designed for:

BBQ products, tempura coated products, fried fish, nuggets and vegetables

Key features:

- The product is run through a bath of coating media; the coating media is not pumped
- Adjustable blower system for removing excess coating material from the top and bottom of products with an integrated material return system
- Suitable for all viscous coating materials
- Continuously adjustable production speed
- Intuitive operation through a touch panel

- Easy-to-clean design, to be cleaned without any auxiliary tools, no parts dismantling required
- High operating safety

Options:

- Double-wall design makes it possible to inject a coolant to cool the coating material through a double-wall design.
- Divided belt system: The dipper's lower conveyor belt is divided into two series-connected belts with their own drive for a more precise coating process
- High-speed product belt: powerful stainless steel drive, allowing for belt speed of up to 29 m/min to achieve larger production capacities
- Special belt: The standard belt is replaced by a belt at the customer's request.

also Battering machine, APN PRO



Applies different liquid coating materials to the top and bottom of your product

Designed for:

The system coats schnitzel, fish sticks, etc. completely and evenly on all sides with batter of various viscosity.

Key features:

- Continuously adjustable production speed
- Top-performance pump system with adjustable speed allows liquid coating materials of various viscosity to be used
- Complete coating of the product with batter on all sides through overflow devices with batter curtain
- Adjustable blower system for removing excess coating material from the top and bottom of products with an integrated material return system

- Intuitive operation through a touch panel
- High operating safety
- Easy-to-clean design
- Can be driven on four heavy-load steering rollers and rotated 360°, with parking brake and height adjustment

Options:

- Cooling jacket makes it possible to cool the coating material by injecting a coolant into the double-jacket container.
- High-speed product belt allows for belt speeds of up to 29 m/min through a top-performance stainless steel drive.
- Rotary lobe pump reliably conveys less flowable coating materials.

also Battering machine, APN ECO



The ECO series of the battering machine is a space and cost saving alternative to the PRO version.

Designed for:

The system coats schnitzel, fish sticks, etc. completely and evenly on all sides with batter or marinades of various viscosity.

Key features:

- Powerful, adjustable pump system
- Adjustable blower system
- Continuously adjustable production speed
- Stainless steel blower drive
- Push button controls
- Designed according to latest hygiene and safety standards
- Compact and solid design



Stein® E™ Series Breading Applicator



Breading applicator for free-flow and J-crumb*. Unique circulation system for maximum crumb size retention.

Designed for:

Application of granular free-flow and J-crumb* coating materials to a wide range of food substrates while maintaining full belt width, product orientation and gentle product handling.

Key features:

- Electric variable speed drive 4.6 - 12 m/min
- Push button controls
- Adjustable lower coating bed depth, adjustable top flow hopper discharge and breading sifter
- Adjustable pressure roll and breading blow-off tubes

* also known as Japanese crumb

Options:

- Hydraulic drives
- Usable belt widths of 400 and 600 mm
- Tie bar connections
- Off-machine blower
- Sifter conveyor to remove lumps from circulation (400 mm)
- J-crumb* circulation kit to control crumb size distribution

alco Breading machine APT PRO



Breading applicator for coarse- and fine-grained breadcrumbs as well as Japanese Panko breading

Designed for:

Application of crispy coatings, handles all free-flowing breading materials, whether fine or coarse-grained.

Key features:

- Continuously adjustable production speed
- Gentle conveyor system with material return and minimal dust formation
- Adjustable blow off system and vibration and pressing devices for achieving the optimal coat result
- Perfect product transfer through a pivotal outlet belt
- Easy to fill the equipment with the material through a storage container

- Intuitive operation through a touch panel
- High operating safety
- Easy-to-clean design, easy to empty the material

Options:

- Vibrating plate presses the coating material on hard and kneads it into the product.
- Fill level monitoring measures the funnel fill level through a sensor and fills the funnel automatically.
- High-speed product belt allows for belt speeds of up to 29 m/min through a top-performance stainless steel drive.

Coating Systems



alco Breeding Machine, APT ECO

Breeding applicator for coarse- and fine-grained breadcrumbs.

Designed for:

The ECO series of the breeding machine is a space and cost saving alternative to the PRO version. With its compact and solid design, it fits into any smaller company and convinces with qualitative results and lush equipment.

Key features:

- Adjustable blow off system
- Simple operation, minimal adjustments required
- Integrated media return system
- Hygienic design



alco Drum Breader, ADB

The alco Drum breader uses a special breeding flour distribution and sprinkling system for hard-to-coat products for automated homestyle breeding.

Designed for:

Genuine homestyle coating of irregularly shaped products

Key features:

- Particularly suitable for completely coating irregularly shaped products (e.g., bone-in products like chicken drums, chicken tenders, etc.) Dried spices, herbs, or flour
- Gentle pre-coating and intense tumble coating in one machine
- Coating with fine or coarse breeding like dried spices, herbs, or flour
- Innovative breeding flour distribution and sprinkling system

- Integrated clump sifting system
- Hygienic design for top product safety
- Easy operation and cleaning with maximum safety

Options:

- Adjustable blow-off system for removing excess coating material and achieving the optimal coat result.
- Lateral supply and refill funnel allows for ergonomic and automatic equipment filling.
- Spindle height adjustment sets the height of the entire plant by means of a handwheel, without the use of tools.

Coating Systems



alco Preduster ABM PRO

The alco preduster allows for ideal processing of fine coating materials like fine-grained flour, spices, powder, and sugar. Two systems of belts guarantee complete and even coating.

Designed for:

Flour, powder, fine sugar and spices

Key features:

- Particular suitable for all coating materials of fine grain
- Conveyor system with material return and minimal dust generation
- Adjustable amounts of coatings to be applied
- Adjustable vibration and pressing devices for achieving the optimal coating result
- Intuitive operation via a touch panel

- Easy to clean design, made entirely of stainless steel and food-approved materials

Options:

- High-speed product belt allows for belt speeds of up to 29 m/min through a top-performance stainless steel drive.
- Vibrating plate used for coarser coating media to be pressed onto the product for optimal coating and to eliminate void spots.
- Spindle height adjustment sets the height of the entire machine by means of a handwheel.



alco Preduster ABM PRO Vario-Flip

The alco preduster Vario-Flip combines two coating styles in just one system. With the Vario-Flip variant, the product inside the system performs four successive flips of 180° each and absorbs more coating material with each flip, for a rough, natural and, above all, handmade coating result.

Designed for:

Sensitive molded products such as chicken tenders or fish sticks, as well as irregularly shaped products such as chicken part

Key features:

- Tool-free changeover between both variants without stopping production
- Tool-free adjustment of the flip height without stopping production
- Perfectly aligned with the growing demand for homemade style products

- In contrast to drum breaders, the Vario-Flip offers fragile molded products an appropriate finish as well

Options:

- High-speed product belt allows for belt speeds of up to 29 m/min through a top-performance stainless steel drive.
- Spindle height adjustment sets the height of the entire machine by means of a handwheel.



Frying/Filtering

Frying/Filtering

Stein® M-Fryer™

Conveyorised immersion-style fryer, electrical or thermal fluid heated, with electro-polished heat exchanger fins for the thermal fluid version.

Designed for:

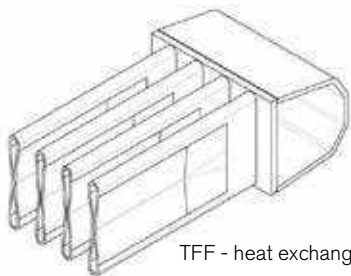
Pre-frying a wide range of coated and uncoated products to set the coating and impart oil to aid flavour development.

Key features:

- THERMoFIN® radiator with electro-polished fins for high rates of heat transfer and lower heat flux with unique design to minimise risk of debris sticking to the fins
- Electric heated with modulation power control for accurate temperature control
- Fin-shaped electrical heating elements
- Improved oil quality and management, and lower oil usage cost
- Sediment collects at infeed for fast removal from fryer
- Integrated sediment removal filter significantly extends the life of the oil
- Accurate temperature control from side-to-side and end-to-end
- Raised interlocking hood enables easy access for efficient and hygienic cleaning
- Built-in oil mist eliminators
- Integrated fire protection system
- Single or double exhaust stack

Options:

- Integration of Stein SF or MX filtration system
- Secondary oil filtration system for tempura-coated products
- Tempura belt infeed
- Choice of fire suppression system, water mist or CO2
- Usable belt widths of 600 or 1000 mm
- Various frying lengths from 4 to 8 metres



TFF - heat exchanger



Frying/Filtering



alco Fryer, AGF

Designed for:

Fries or cooks meat, fish, and plant-based food.

PRO SERIES

Flexible frying settings for flash frying, searing or for full cooking

Key features:

- High-power electrical or thermal oil heat exchanger
- Optimum heat transfer through an effective oil circulation system
- Conveyor system includes upper and lower belt; with crank adjustment between 25 mm – 80 mm
- Oil level control with radar sensor technology incl. 2-way communication with external oil management system
- Sediment removal system

- Stainless steel geared motors for the upper and lower belt

Options:

- Exhaust chimney system with filter directs the exhaust through stainless steel chimney pipes from the suction sockets of the fryer out of the production room. Optionally, the exhaust from the fryer can effectively be prefiltered.
- Cross-dirt transport removes dirt particles early on.
- CIP is a complete cleaning system for the interior of the fryer with preconnected automatic emptying.



ECO SERIES

Our ECO version is particularly suitable for smaller businesses.

Key features:

- High-power electrical heat exchanger
- Efficient and energy saving heating system for extremely low energy consumption
- Sidewise fixed chimney with control flap
- PLC control with 7" touch screen and recipe management
- Electrical lifting device via electrical scissor lifting lifts up hood and belt system simultaneously
- Control of minimal oil filling level by means of an integrated level sensor and optical warning signals

Options:

- Special lower belt: Robust, finely woven metal conveyor with side chains for products like shrimps, gyros, etc.
- Usable belt widths of 450 or 650 mm with frying lengths of 2 or 3 meters



Stein® MX Series MicroMax™ - II & III Centrifugal-Style Hot Oil Filter

Decanter-style, continuous centrifugal hot oil filter.

Designed for:

The continuous removal of flour and other debris from frying oil.

Key features:

- Decanter filter
- Rotating stainless steel bowl provides separation via difference in specific gravity of sediment and oil
- Filters down to single digit micron levels
- Continuous operation and automatic removal of sediment from the fryer/filter system
- Built-in CIP system

- Continuous 75 or 114 lpm positive displacement-style feed pump, and 114 lpm positive displacement-style clean oil return pump
- Removes 50% more free oil from sediment than other filter methods

Options:

- Centrifugal or positive displacement oil pump



Stein® SF™ Force Flow Hot Oil Filter

Automatic oil level-based, semi-continuous force flow filter utilising stainless steel mesh filter media.

Designed for:

The continuous removal of coating sediment and other frying debris from a conveyerised frying system.

Key features:

- Stainless steel woven mesh belt filter media in 60 or 80 micron filtration size
- Variable flow centrifugal-style feed pump activated by oil level float system
- Centrifugal-style filter suction/discharge pump
- Push button controls

Options:

- Paper filter attachment for finer filtration
- Controls integrated with fryer controls
- Size ranges 0,28 m², 0,65 m² and 1,02 m²
- Crumb cart



Cooking/Searing and Grill-Marking



Cooking/Searing and Grill-Marking

Stein® TwinDrum™ 600 Spiral Oven



A twin drum in-line oven with a unique airflow system guaranteeing superior heat transfer and uniform temperature and product colour.

Designed for:

Cooking, steam-cooking, frying or pre-frying all forms of poultry and breaded products; a high temperature capability ensures excellent results on roasted boneless and bone-in chicken.

Key features:

- Compact design, 9.4 x 3.8 metres
- Low roof height, 2.9/3.6 metres high (production mode)
- Heat and humidity controlled separately in each zone
- Airflow technology with superior heat transfer rate and uniformity
- Excellent colour consistency right across the belt
- Uniform airflow across all tiers guarantees high product yield
- Hot belt return to save energy
- Independent humidity and temperature controls, 2-zone cooking

- Fans positioned at floor level for easy access and cleaning
- Split-level hood
- Extended belt life due to innovative drive system
- Automatic cleaning with recirculating cleaning system
- PRoLINK™ controls
- Built-in SCADA-ready network

Options:

- Various belt configurations
- Various belt types
- Standard or high capacity heat exchanger
- Automatic humidity control options
- Different belt wash systems



Cooking/Searing and Grill-Marking



alco Spiral Oven, ASH

The spiral oven from alco slowly and gently runs products through the cooking process by means of a spiral conveyor belt that can be extended if required.

Designed for:

The alco spiral oven heats, cooks, and browns products with circulating air and/or steam.

Key features:

- Suitable for products of various sizes thanks to a selectable gap between the individual levels of the spiral
- Targeted airflow guarantees optimal and uniform heat transfer and browning, with temperatures up to 260 °C
- Insulated housing design for preventing energy losses
- Steam injection bars for setting the desired humidity

- Automatic, continuous belt wash system in combination with CIP nozzles in the interior of the oven ensures perfect cleaning
- Continuously adjustable production speed
- High operating safety

Options:

- Dew point control for maximizing yield
- Steam nozzles additionally heat the product through direct steam injection for lowest weight loss
- Optionally heated electrically or with thermal oil or steam-powered



Double D® Revoband Continuous Protein Oven

High volume, high impingement, indirect-fired linear oven with independently controlled zones and accurate temperature and airflow control.

Designed for:

High volume in-line cooking, roasting or steaming of meat, poultry, fish and vegetables.

Key features:

- High impingement airflow ensures excellent product consistency and colour
- Cook by dry heat up to 280°C (540°F)
- Combination cook using dry heat and live steam
- Custom-built stainless steel travelling belt with variable speed controls
- Independently controlled fans

- Air delivery from both above and below the belt
- Variable fan speed
- Independently controlled zones to suit product requirements
- Indirect-fired
- Heated by thermal fluid, indirect gas or electricity
- Menu-driven PLC with 100 programme settings

Options:

- Browning tunnel for generating high colour on large joints of meat, without additives
- Hold-down belt for producing ultra flat cooked bacon
- Infra-red sealing and searing unit
- Clean In Place system



Double D® Revoband Searer/Grill-Marker

Conveyorised direct-fired gas surface treatment system for grill-marking and/or surface searing.

Designed for:

Surface treatment of a variety of protein substrates requiring grill marks or surface searing.

Key features:

- Chain-edged stainless steel continuous belt
- Fully welded stainless steel enclosure with side doors and infeed/discharge pivoting hoods
- Simultaneous searing and grill-marking
- Temperature controlled adjustable rings for even grill-marking
- Fully controlled, high capacity, interchangeable burners

- Variable belt speed
- Stainless steel motors and gear boxes
- Automatic cooling system
- In-built safety and fire suppression system
- Water bath to collect 'cook-out' residue
- Access doors
- PLC controls

Options:

- 300 mm in-feed and discharge conveyor extensions
- Available with direct electric drives with heat sink
- Vented hood (gives an insulated outer shell)
- Infra-red



Double D® Revorack Multi-Purpose Cooker

A versatile cooker capable of any task in the further processing of meat, fish, poultry, vegetables and ready meals.

Designed for:

Versatile, efficient and consistent steam cooking, roasting or baking of a large variety of products on racks.

Key features:

- Rotating turntable for consistently cooked and evenly coloured product every time
- Turntable moves the product continuously through a highly efficient air distribution system
- Available from single rack to 10-rack capacity

- Efficient High Risk/Low Risk control
 - ▶ Rear door as standard
 - ▶ Interlocking doors
 - ▶ Operator controls on both sides of the cooker
- Optional Clean In Place system



Cooking/Searing and Grill-Marking

Formcook® Contact Cooker



Continuous direct contact cooking on two sides simultaneously; fast heating of products creates uniform and natural looking appearance.

Designed for:

Sealing natural fats and juices in a wide range of products for highest product quality, home-made appearance and minimum cooking losses.

Key features:

- Electric or thermal fluid oil heat source
- Adjustable cooking time
- Temperature range up to 260°C
- Accommodates products up to 70 mm high
- Automatically controlled belt tracking and tension
- Independent electrical plate temperature control

- Adaptable infeed and outfeed lengths
- Continuous belt cleaning system

Options:

- Oil applicators
- Pre-heated infeed
- Overall belt widths of 400, 600 and 1100 mm
- Thermal fluid mild steel platens for thin products
- High resolution lift
- High resolution drive
- Fat removal system

Formcook® Combi Cooker



Contact, convection and steam cooking, all in one machine; products are cooked on a solid non-stick cooking belt that runs over heating plates using steam and forced air on the top to provide the necessary temperature and colour.

Designed for:

Cooking all types of products, with or without bone, providing high quality products with a home-made appearance.

Key features:

- Electric heat
- Temperature range up to 260°C on the heating plate and 280°C on air
- Automatically controlled belt tracking and tension
- Independent platen, air temperature and steam control
- Adaptable infeed and outfeed lengths

- Continuous belt cleaning system

Options:

- Product flip
- Oil applicators
- Pre-heated infeed
- Overall belt widths of 600 and 1100 mm

Double D® Forced Convection Oven



Steam and high temperature forced air convection oven.

Designed for:

Cooking or pre-frying a wide range of products, particularly those that require long cooking times, or to achieve the final core temperature after having been pre-cooked in another oven.

Key features:

- Electric heat source
- Adjustable cooking time
- Temperature range up to 280°C on air
- Steam is 'sprayed' on products from both top and bottom
- Accommodates products up to 150 mm high
- Adaptable infeed and outfeed lengths
- Continuous belt cleaning system

Options:

- Can be used as a complement to other processing equipment such as a contact cooker, a combi cooker or a fryer, to achieve the correct core temperature in the product

alco Linear Oven, AGU



Two separately adjustable heating areas provide the option of cooking and browning food at the same time using different temperatures. That way, the system makes perfect use of energy consumption. Different product sizes easily fit into the oven side by side, and the oven allows for consistent cooking results through hot circulating air and/or steam.

Designed for:

The alco linear oven heats, cooks, and browns products with circulating air and/or steam.

Key features:

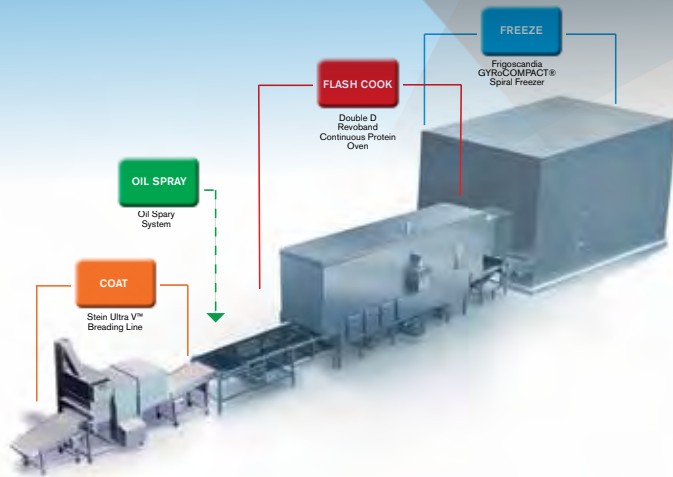
- Targeted airflow guarantees optimal and uniform heat transfer and browning, with temperatures up to 250 °C
- Steam injection bars for setting the desired humidity
- Optimal dew point control for maximizing yield
- Insulated housing design for preventing energy losses
- Air speed adjustable through ventilators

- Continuously adjustable production speed
- Automatic, continuous belt wash system in combination with CIP nozzles in the interior of the oven ensures perfect cleaning

Options:

- Dew point control ensures a consistent and constantly adjustable climate through a moisture measurement and control system
- Optionally heated electrically or with thermal oil or steam-powered

Cooking/Searing and Grill-Marking



JBT Dry-Fry System

A complete in-line process which includes the Stein Ultra V™ coating line, a fully controllable oil spray system, the Double D® Revoband Continuous Protein Oven and the Frigoscandia GYRoCOMPACT® Spiral Freezer or Chiller.

Designed for:

Processing a wide range of healthier food options by reducing the amount of oil delivered to the product, while maintaining a 'just fried' taste and appearance.

Key features:

- Elimination of pre-frying stage means cleaner, healthier and better tasting product
- Controlled oil levels can produce 'lower fat' or 'never been fried' options with up to 50%+ reduction in oil pick-up
- High impingement airflow system enables excellent setting and colouring of coating
- Fan speed control in each zone produces unlimited flexibility and precision

- High temperature up to 280°C
- Coated and sprayed product is flash-cooked for 1 – 2½ minutes ensuring efficient setting of coating
- Process suitable for any pre-dust batter, J-crumb*, or coating suitable for baking
- Final product colour can be carefully controlled to achieve specific requirements
- Powerful Clean In Place system removes crumbs and coating residue

Options:

- Oil levels can be varied to produce 'reduced fat', 'lower fat' or 'low fat' options
- Products can be sprayed with a range of oils such as vegetable oil, olive oil or flavoured oils to aid new product development

* also known as Japanese crumb



Cooking/Searing and Grill-Marking

alco HotCook AHC



The highly efficient and rapid heat transfer of the HotCook from alco ensures that seared food keeps its fresh taste. The HotCook also guarantees an ideally homogeneous mixing result, as changeable rotating devices thoroughly mix sauces and stews.

Designed for:

Mixing, cooking, searing, sautéing, braising, cooking with direct steam injection as well as for reduction and re-cooling of products. What's special about our HotCook is that it's a real all-rounder. Even sensitive products can be processed in a perfectly gentle way.

Key features:

- Heatable special double-wall design with double-shaft paddle mixing tools and scrapers
- Homogeneous temperature distribution and optimal mixing characteristics even with big batches
- Suitable also for sensitive products thanks to gentle mixing tools

- Highly efficient heat transfer with short reaction times
- Monitoring of the product, flow, and return temperature
- Pneumatically driven discharge flaps for easy emptying
- Designed according to latest hygiene and safety standards

Options:

- Vacuum cooling unit
fastest product cooling through precise suctioning of steam by a high-performance vacuum unit.
- Direct steam injection
heating with direct steam injection, cooking temperatures are reached much faster.
- Cryogenic gas injection: cooling or freezing applications with CO₂ or N₂
- Practical dosing device and weighing unit for easy recipe compilation
- Heavy duty drives: for cooling processes or various other heavy-duty applications





Spiral Freezers



Frigoscandia® Spiral Freezers

The most effective spiral freezer, chiller and proofer

The Frigoscandia GYRoCOMPACT® Spiral Freezer, Chiller or Proofer is the industry benchmark for performance, hygiene and overall operating economy. With its patented FRIGoBELT® self-stacking belt and no-tension drive system this freezer outperforms all other spiral freezers on the market with over 4,000 installations worldwide. The unique self-stacking belt provides a self-contained, 100% cleanable product zone with a vertical controlled airflow that delivers uniform air distribution across and through the belt stack.

The main features and benefits of the GYRoCOMPACT Spiral Freezer, Chiller and Proofer are:

1) Self-supporting product zone

- The belt forms its own support structure
- 100% cleanable
- No glide strips or support structure in the product zone

2) Vertical controlled airflow

- Highest possible heat transfer
- No risk for moving products
- Even product temperature

3) No tension drive system

- No drum to wrap the belt around
- No risk of overstretching the belt
- All forces in the drive system instead of in the belt



The GYRoCOMPACT Spiral Freezer is available in belt widths from 400 mm up to 1,000 mm in a large variety of capacity sizes, options and layouts.

Spiral Freezers

Self-Stacking Spiral System



Frigoscandia GYRoCOMPACT® 40 Spiral Freezer and Chiller

The industry standard for freezing operations in the lower capacity segments from about 300 kg up to 1,000 kg/hr; the GYRo-COMPACT 40 Spiral Freezer is preassembled and can be put into operation in a factory environment in a very short time; the compact dimensions and the preassembly mean that the freezer can also be relocated in a relatively easy manner.

Key features:

- Very compact footprint
- FRIGoBELT® Nova self-stacking stainless steel mesh belt
- Fully seal-welded, stainless steel floor design with elevated floor-to-wall joint
- Fully preassembled for quick installation and easy transportation
- FRIGoDRIVE® system replaces outdated wagon drive system
- Vertical airflow with countercurrent heat exchange for maximum heat transfer rate

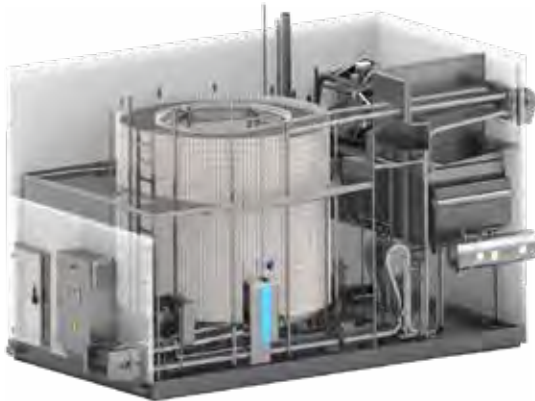
Options:

- Available with multiple belt options:
 - ▶ 3 levels of vertical product clearance available, 50, 65, and 85 mm
 - ▶ Wide range of tiers
 - ▶ Choice of several types of mesh belt
- Straight through or U-shaped layout
- Air Defrost (ADF) system for simple, durable and energy-efficient operation
- Wide variety of different cleaning systems, including full extended CIP capability
- Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%



Frigoscandia GYRoCOMPACT® 60 Spiral Freezer and Chiller

A highly modular and flexible self-stacking spiral freezer from the GYRoCOMPACT range, with a 600 mm wide FRIGoBELT® Nova belt and a freezing capacity of between 800 kg and 3,000 kg/hr, depending on product and freezer specifications.



Key features:

- Compact footprint
- FRIGoBELT Nova self-stacking stainless steel mesh belt
- Fully seal-welded, stainless steel floor design with elevated floor-to-wall joint
- Preassembled for quick installation and easy transportation
- FRIGoDRIVE® conveyor system for trouble-free no-tension function with no centre drum
- Vertical airflow with countercurrent heat exchange for maximum heat transfer rate

Options:

- Available with multiple belt options:
 - ▶ 3 levels of vertical product clearance available, 65, 85, and 105 mm
 - ▶ Wide range of tiers
 - ▶ Choice of several types of mesh belt
- Straight through, angled or U-shaped layout
- Air Defrost (ADF) system for simple, durable and energy-efficient operation
- 4 different cleaning systems
 - ▶ Belt rinse
 - ▶ Belt CIP for cleaning of the product contact zone
 - ▶ Basic CIP for cleaning of the product contact zone and evaporator area
 - ▶ Extended CIP for cleaning of the entire freezer
- Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%



Spiral Freezers

Frigoscandia GYRoCOMPACT® 70 Spiral Freezer and Chiller

The Frigoscandia GYRoCOMPACT® 70 Spiral Freezer has evolved from one of JBT's best selling products, the GYRoCOMPACT® M7 Spiral Freezer. It retains all the best Frigoscandia® technology, including the Frigoscandia Nova self-stacking belt, which can include a 10-year warranty.



Key features:

- Increased capacity of up to 20% on a smaller space
- Enhanced hygienic design ensures superior food safety
- Sustainable design leads to reduced cost of ownership
- Oil consumption reduced by up to 75%
- System innovations provide enhanced performance and efficiency
- Improved FRIGoBELT® Nova optimises efficiency, capacity and layout flexibility
- Open profile self-stacking spiral design is 100% cleanable
- Improved airflow reduces air infiltration and reduces energy consumption
- Enhanced drive system allows increased stack weight up to additional 10%
- Cloud-based iOPS, data transformation and airflow control provide enhanced performance and efficiency

Options:

- Three different levels of Clean In Place systems
- Performance optimization system, iOPS, to gather and analyse data
- More tier capability due to higher air flow performance
- New belt configurations for products up to 50mm allow more tiers in given headroom
- Options for shortened turn-around time such as improved drying functions



Spiral Freezers

Frigoscandia GYRoCOMPACT® M10 Spiral Freezer and Chiller

A highly modular and flexible self-stacking spiral freezer from the GYRoCOMPACT range, with a 1,015 mm wide FRIGoBELT® Nova belt and a freezing capacity of between 2,000 kg and 7,000 kg/hr, depending on product and freezer specifications.



Key features:

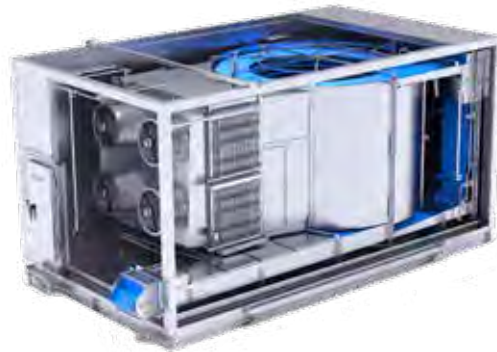
- High capacity related to actual footprint
- FRIGoBELT W (reinforced) self-stacking stainless steel mesh belt
- Fully seal-welded, stainless steel floor design with elevated floor-to-wall joint
- FRIGoDRIVE® M conveyor system for trouble-free no-tension function with no centre drum
 - ▶ Allows for trouble-free operation with high stack weights and belt speeds
- Vertical airflow with countercurrent heat exchange for maximum heat transfer rate

Options:

- Available with multiple belt options:
 - ▶ 4 levels of vertical product clearance available, 65, 85, 105 and 135 mm
 - ▶ Wide range of tiers
 - ▶ Choice of several types of mesh belt
- Straight through, angled or U-shaped layout
- 4, 5 or 6 fan versions for optimal energy efficiency and capacity
- Air Defrost (ADF) system for simple, enduring and energy-efficient operation
- Sequential defroster
- 4 different cleaning systems
 - ▶ Belt rinse
 - ▶ Belt CIP for cleaning of the product contact zone
 - ▶ Basic CIP for cleaning of the product contact zone and evaporator area
 - ▶ Extended CIP for cleaning of the entire freezer
- Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%



alco Spiral Freezer, ASK



Guarantees easy product handling, optimal structure preservation, and maximal durability, freshness, and flavor. With the spiral technology, our spiral freezer allows for a maximal conveyor line within a small space.

Designed for:

With the spiral freezer, you'll cool and freeze your products quickly, efficiently, and hygienically.

Key features:

- Efficient cooling and freezing system for uniform, quick freezing of products to prevent losses through dehumidification
- Suitable for products of various sizes thanks to a selectable gap between the individual levels of the spiral
- Suitable for all freon refrigerants like ammonia NH_3 , carbon dioxide CO_2 , ice water, or brines

- Different thawing options with circulating air, hot gas, water, or electrically useable

- Special belts and intake modules for the perfect product run

Options:

- Different amount of tiers for an individual belt length and belt surface
- Evaporator is chosen exactly according to the power needed
- Stainless steel belt or hybrid belt are available with different kinds of width
- Select between a water, electrical or hot gas defrosting system for minimum turn-around times
- Several systems for ideal cleaning of the freezer available

alco Proofer, ASG



The proofer from alco will process your products consistently, gently, and quickly. It will also take up little space thanks to the spiral technology. Each machine will be tuned specifically to your production process and can be designed with flexibility according to your requirements for the number of levels.

Designed for:

The alco proofer is best suited for continuous proofing of various dough products.

Key features:

- Suitable for products of various sizes thanks to a selectable gap between the individual levels of the spiral
- Optionally heated with steam and/or electrically
- Steam injection bars for setting the desired humidity
- Combination of multiple spirals in one machine possible
- Continuously adjustable production speed

- Automatic, continuous belt wash system in combination with CIP nozzles in the interior of the oven ensures perfect cleaning

Options:

- Fully sealed insulation cell provides increased tightness and no maintenance joints (compared to numerous individual panels).
- Humidifier systems optimally humidify rooms according to product and use through steam humidification, ultrasound humidification, or high-pressure humidification.
- Frequency converter continuously sets the speed of the ventilators for special air speed requirements.
- Individual product conveyor belts allow for ideal conveying of your products according to the product requirements with various machines and surfaces.

A close-up photograph of several pieces of raw, red meat, likely beef, arranged on a wooden cutting board. The meat is vibrant red with visible marbling. In the foreground, there are fresh green herbs, possibly rosemary, and a variety of whole spices including black, white, and red peppercorns. The background is softly blurred, showing more of the cutting board and some additional herbs.

Impingement Freezers

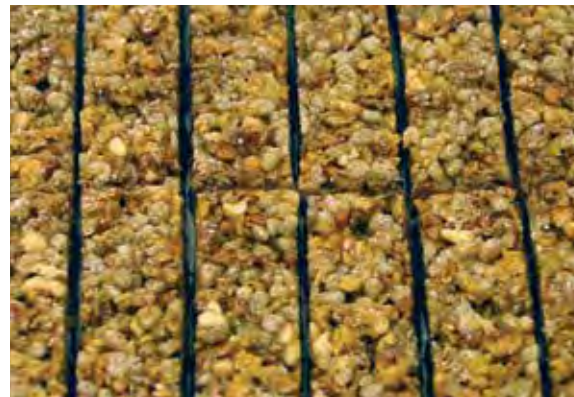
Frigoscandia ADVANTEC™ Impingement Freezers

Airflow technology that delivers quality and profit

Achieving rapid heat removal without otherwise affecting the product, our patented Frigoscandia ADVANTEC impingement airflow technology excels both at freezing and chilling. Dehydration is minimised and yield is maximised. This means that taste, mouthfeel and product quality are assured. Custom-designed to quickly and efficiently freeze flat products up to 25 mm thick, and to chill and crust-freeze products up to 200 mm thick, ADVANTEC impingement freezing is tailored to rapidly and cost-effectively freeze or chill every product.

The main features and benefits of the Advantec Impingement Freezers are:

- 1) Well-balanced high velocity impingement airflow, from top and bottom
 - Very high heat transfer for optimal product quality
 - Controlled airflow pushes product against belt to avoid product movement
 - Optimised airflow means low power consumption
- 2) Modular design and various options
 - Easy to customise for individual factory requirements
 - Cleaning options to cater for different cleaning needs
 - Air defrost for longer operating time between defrosts
- 3) Hygiene by design
 - All stainless steel design
 - All areas of freezer accessible for cleaning



Our ADVANTEC freezer product line comes in many different sizes and with many options to make it as optimised as possible for your specific production needs.

Impingement Freezers



Frigoscandia ADVANTEC™ Impingement Freezer

An efficient impingement freezer or chiller ideal for freezing small and thin products, or for crust-freezing larger products with minimal dehydration.

Key features:

- Balanced high velocity impingement airflow for maximum freezing efficiency and lowest dehydration
- Modular system with many different sizes and capacity levels
- Fan arrangement is designed so that no high air pressure affects the enclosure panel walls
- Single or double belt configuration
- Overall belt widths of 1250 or 1800 mm
- Fully seal-welded stainless steel floor design with elevated floor-to-wall joint

Options:

- Single or double belt configuration
- Overall belt widths of 1250 or 1800 mm
- CIP system available
- Air Defrost system (ADF) for longer operating time between defrosts
- Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%





Frigoscandia ADVANTEC™ Compact Chiller

A modular 'plug-and-play' in-line production source for operations where a faster, more cost-effective way to surface-stabilise or rapidly chill product prior to slicing is needed.

Key features:

- Delivered completely preassembled for quick installation and easy relocation if necessary
- Fully welded floor and enclosure for maximum hygiene
- Identical balanced highly efficient impingement airflow system as the ADVANTEC Impingement Freezer
- 1,250 mm belt width
- Sliding doors on each side for easy access for cleaning and maintenance

Options:

- Single or double belt configuration
- Available in 3 capacity steps
- Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%



The background of the slide is a close-up photograph of fresh produce. The top half shows a dense field of bright green peas, while the bottom half shows a dense field of white onions. A semi-transparent white horizontal band runs across the middle of the image, serving as a background for the title text.

IQF Freezers

Frigoscandia FLoFREEZE® IQF Freezers

The most effective and flexible IQF freezer

The Frigoscandia FLoFREEZE IQF Freezer, with its ingenious fully fluidising principle, has been the standard in the industry since the early 1960s. IQF freezing with true fluidisation was invented in 1962, creating a new way for consumers to enjoy fresh fruit and vegetables many months after they are harvested. True fluidisation gives you premium IQF results, and thus the best return of investment. Thanks to our continuous technological advancements, you can now IQF freeze a much greater range of products, in much less space, at much lower cost. At JBT, we promise you IQF freezing capabilities that serve and stimulate your growth and profit in this market.

The main features and benefits of the FLoFREEZE IQF freezers are:

1) True fluidisation

- Highest possible heat transfer
- Minimises risk of products sticking together
- Gentle handling of products

2) Versatile for many different products

- Belt agitation for separation at the critical crust-freezing stage
- Pulsation for gentle separation of delicate products to minimise lumps

3) Hygiene by design

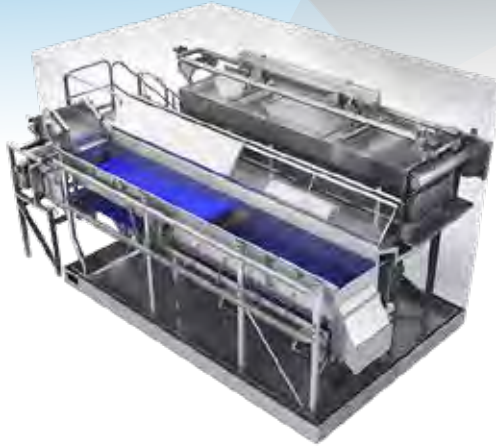
- All stainless steel design
- All areas of freezer accessible for cleaning



The FLoFREEZE IQF freezers are available in capacities from 500 kg/hr to over 17,000 kg/hr in a large variety of capacity sizes and options.

IQF Freezers

Frigoscandia FLoFREEZE® A IQF Freezer

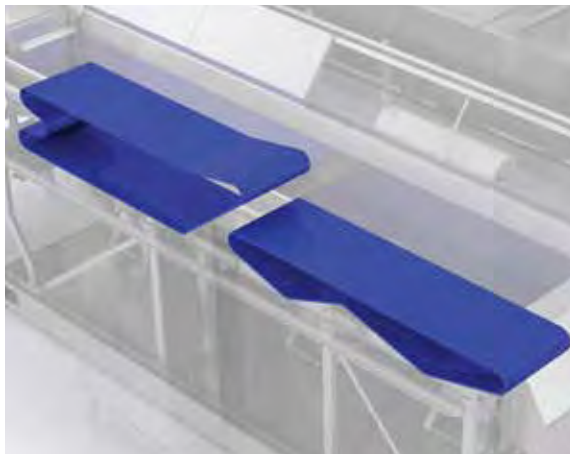


The optimal solution for very high quality IQF freezing for capacities between 1,100 kg/hr and 5,600 kg/hr.

- A freezer for every IQF need with built-in versatility
- Available in 5 sizes, FLoFREEZE A10e to A50e
- Available in tray or track configuration
- Tray configuration for products that are easier to fluidise and to satisfy high hygiene demands
- Special IQF track configuration with dual zone fluidisation for optimal freezing conditions
- Air pulsator for gentle handling of delicate products for highest possible product quality
- Track agitation for separation of long or sticky products
- Modular design for quicker installation

- Stainless steel floor with bathtub design for optimal hygiene
- Automatic Air Defrost (ADF) system for energy efficient operation with minimum 22 hours between defrosts
- Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%

Frigoscandia FLoFREEZE® M IQF Freezer



High quality and high capacity IQF Freezing for capacities between 5,600 kg/hr and 16,300 kg/hr

- A freezer for every IQF need with built-in versatility
- Available in 6 sizes, FLoFREEZE M20, M25, M30, M40, M50 and M60
- Available in tray or track configuration
- Special IQF track configuration with dual zone fluidisation for optimal freezing conditions
- Air pulsator for gentle handling of delicate products for highest possible product quality
- Track agitation for separation of long or sticky products
- Stainless steel floor with bathtub design for optimal hygiene

- Automatic Air Defrost (ADF) system for energy efficient operation with minimum 22 hours between defrosts
- Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%



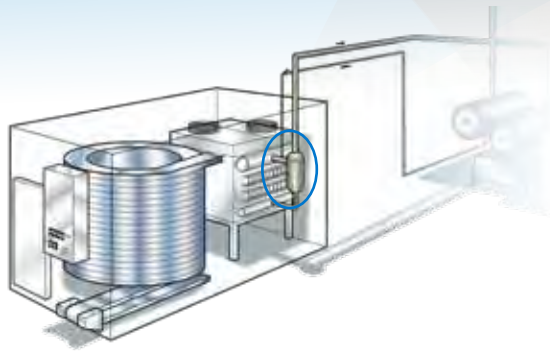
Frigoscandia FLoFREEZE® M Sequential Defrost IQF Freezer

High quality and high capacity IQF freezing for capacities between 7,000 kg/hr and 16,800 kg/hr with extended run time between defrosts.

- A freezer for every IQF need with built-in versatility
 - Designed for long operation time between defrosts above 24 hours of continuous operations
 - Available in 5 sizes, FLoFREEZE M3SD, M4SD, M5SD and M6SD, M7SD
 - IQF track configuration with dual zone fluidisation for optimal freezing conditions
 - Air pulsator for gentle handling of delicate products for highest possible product quality
 - Track agitation for separation of long or sticky products
- Stainless steel floor with bathtub design for optimal hygiene
 - Sequentially defrosted evaporators for non-stop production more than 144 hours continuously
 - Possibility to add re-freezing belt
 - Frigoscandia's renowned LVS system for energy-efficient refrigeration
 - ▶ Minimises pressure drop between freezer and refrigeration system
 - ▶ Reduces the refrigerant charge by a minimum of 50%



LVS Refrigeration System



LVS Refrigeration System

LVS Refrigeration utilises optimised low-pressure-drop evaporator design, in conjunction with specially designed LVS vessels, which maintain correct liquid flow through the evaporator to ensure optimal evaporator performance; no valve adjustment is needed to achieve this flow as it is a function of the design.

Designed for:

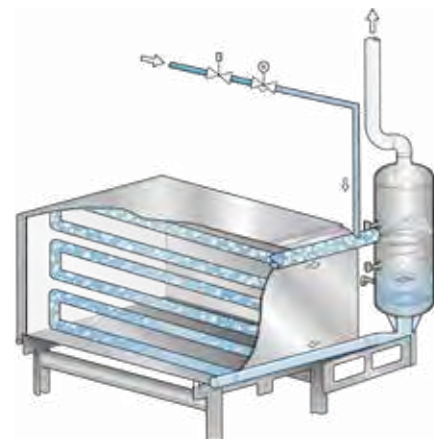
Supporting freezing and chilling systems by supplying and managing refrigerant to and from freezing and chilling equipment, including but not limited to all lines of JBT spiral and linear freezing systems with a wide range of capacities.

Key features:

- Reduces pressure drop from freezer to compressor
- Improves the evaporator performance
- Eliminates fluctuating evaporation temperatures caused by liquid build-up in risers
- Eliminates the liquid distribution problems associated with various freezers working at different capacities
- Increases the refrigeration capacity of existing vessels and reduces the required refrigerant charge
- Enables operation at evaporation temperatures down to -50°C provided installed equipment is suitable for the required temperature
- Refrigerant pumps may either be eliminated or will work at lower flow rates, where they are generally less susceptible to cavitation problems
- Stainless steel vessel for internal or external installation
- Wide range of evaporator temperatures available

Option:

- LVS QuickDry - Reduce your drying time to half
 - ▶ A unique option to the LVS-system
 - ▶ Dries your freezer efficiently and quick for smooth and efficient freezer turn-around
 - ▶ Requires hotgas availability



Want to have up
to an hour of
extra production?

A collage of fresh green vegetables including broccoli, green onions, avocado, zucchini, green bell pepper, and grapes. The text "More food technology solutions" is overlaid in the center.

More food technology solutions

FTNON Hygienic DCC Steaming Technology

Maximal energy savings (from 30 to 90%)

FTNON has a long tradition of producing blanchers and steamers. The FTNON Dynamic Cloud Control (DCC) is a revolutionary hygienic, steaming technology, that considerably improves the energy efficiency of steamers. Compared to conventional steamers, the exhaust of steam from the steamer is reduced to a minimum and considerable reductions on steam consumption, ranging from 30 up to 90%, are achieved. The related savings on water and energy consumption are really spectacular.



DCC Steaming Technology

The DCC - Dynamic Cloud Control - concept is based on the use of difference in density between atmospheric steam and air. The system automatically creates a balanced and 100% steam atmosphere. Thanks to atmospheric pressure, the temperature will be $\pm 98-100^{\circ}\text{C}$ / $208-212^{\circ}\text{F}$. The steam demand is based on product temperature and capacity.

Highly hygienic steaming systems.

The FTNON DCC Steamers are available in belt and screw type, and in a large variety of capacities, sizes and options.

Optimal steaming process by means of a 100% steam atmosphere

The primary purpose of steaming is to improve shelf life. Furthermore, it is possible to improve the organoleptic properties, like taste, bite, smell and texture. Additional applications are:

- Inactivation of enzymes
- Inactivation of bacteria
- Compression of cooking time
- Improvement of product quality
- Gelatinization of starch
- Sanitizing / Disinfection
- Thawing



Belt and Screw Type Systems

System used depending on product specification.

Key Features

- Optimal heat transfer
- Minimum start-up time
- Minimum steam required for start-up
- Automatic steam regulation: no product = no steam
- Energy efficient system
- Minimum product colour loss
- No flushing out of nutrients, vitamins etc.
- Minimal waste water (only condensate)
- No need for exhaust systems
- Less time required for cleaning, because of top hygienic design and liftable hood
- Top hygienic design



Thanks to the highly hygienic DCC process you can save considerably on energy.

Avure High Pressure Processing (HPP)

JBT - Avure HPP Processing Machines

HIGH PRESSURE PASTEURIZATION (HPP) is cold pasteurization in pure water; it uses ultra-high pressure purified water to keep packaged food pathogen-free to stay fresh longer. At very high pressures bacteria such as Listeria, E. coli, and Salmonella are inactivated. Foods using HPP include ready-to-eat and ready-to-cook meats, ready-meals, fruits and vegetables, juices and smoothies, soups and sauces, wet salads and dips, dairy products, seafood and shellfish. HPP helps producers increase food safety and extend shelf-life while providing consumers with nutritious, natural, flavorful food.

JBT-AVURE helps producers implement HPP from recipe development to installation and beyond of the fastest and most reliable systems. AVURE equipment is used to treat the majority of all HPP-protected food around the world.

Why HPP?

- GREATER PROFITABILITY: Than Conventional Processing
- FRESH TASTE: Not Altered by Heat, Chemical or Irradiation
- CLEAN LABEL: Aligns with Consumer Trends
- LONGER SHELF LIFE: Drastically Reduces Spoilage
- FOOD SAFETY: Extreme Pressure Inactivates Pathogens

Why Avure?

- Most Experienced
- Highest Productivity
- Robust Engineering
- Application Expertise
- 24/7 Support





Avure High Pressure Processing (HPP)

JBT - Avure HPP Processing Machines



AV-40X-70X:

40-70 Million Pounds Per Year
19-32 Kilograms Per Year



AV-20M-40M:

22-40 Million Pounds Per Year
10-18,1 Kilograms Per Year



AV-10:

10 Million Pounds Per Year
4.5 Million Kilograms Per Year

Proseal Tray Sealing Technology

Proseal designs and manufactures high quality tray sealing machines, conveyor systems and sealing tools for food industry markets worldwide.



GTR

GT0s

GT2e

GT4s

GT6eXTwin



ATMOSPHERIC SEAL



GAS FLUSH



HERMETIC SHRINK



VACUUM / GAS



SKIN PACK



SKIN PLUS



SKIN DEEP



Proseal machinery is designed to be innovative, user friendly and hygienic whilst offering all of the flexibility and speed demanded by the fastpaced food industry.

As well as designing its machines for long term durability, reliability and efficiency Proseal is committed to surpassing customer expectations, supporting all its machines throughout their lifetimes with unrivalled after-sales service support.

A top-down view of various fresh ingredients including chicken, salmon, beef, vegetables, and nuts. The ingredients are arranged on a dark grey surface. In the center, there is a piece of raw beef on a white paper. To the left, there is a piece of raw chicken. To the right, there is a piece of raw salmon. The ingredients include: a green apple, a bowl of yellow powder, green beans, almonds, walnuts, mushrooms, green peppers, a lime, basil, fennel, dill, broccoli, cherry tomatoes, a small white bowl of red grapes, ginger, and Brussels sprouts. The text "Food Technology Centres" is overlaid in the center in a blue font.

Food Technology Centres

Food Technology Centres



Plan a visit to JBT's European Food Technology Centres in either Helsingborg in Sweden, near Edinburgh in the UK or Bad Iburg, Germany, to enhance your current products and create successful new ones for the future.

For over 40 years, JBT's Food Technology Centres (FTCs) have been popular destinations for hundreds of food processors throughout Europe, Middle East and the rest of the world.

You can come for training, product development, testing and to simulate runs in the privacy of our 2,000 m² facility in Sweden and 300 m² in the UK.

The FTCs are aimed at providing you with a complete processing plant away from home, where you can portion, coat, fry, cook and freeze with our new and enhanced equipment in a totally secure and private environment.

You can also learn how to improve throughput, yield, speed, product quality and consistency, and more.

With the best knowledge comes the best product.

There's no substitute for a knowledgeable staff. Keeping up with the latest technologies and trends is crucial to efficient production. Our trained and experienced team at JBT will ensure you always get the most value out of your product.

We can create a training programme tailored to your exact needs. Whether it's process and equipment applications, preventative equipment maintenance or another programme, our FTCs have all the equipment and resources to suit your needs. We also offer classroom and hands-on lab sessions.

With knowledge of over 10,000 different food processing applications, we can train your team at our facility, or yours, to create the best value.

To make reservations for the FTCs, contact your local JBT office.



Customer Care

Customer Care

PRoCARE® Service Overview

PRoCARE® is our branded service level agreements, designed to optimise uptime for your JBT equipment and therefore offers a range of fully customisable services that can be adapted to both the size and nature of your organisation. Keep in mind that before we even begin our preventative care program, we perform a thorough inspection of your equipment, establishing a good baseline performance level to ensure everything is running as it should from the start.

Our mission is to provide and ensure productivity. The offering is scalable, we offer you uptime, reduced risk, and a flexible and skilled service partner.

Some of the PRoCARE building blocks:

Inspections

Regular inspections is the basis for safe and reliable operation. Our skilled service technicians will carry out the inspection and provide you with a detailed report that gives you an overview of the status of your equipment together with our recommendation of actions.

Formula Family Consumables

To reduce equipment wear, the specially developed Formula lubricants from JBT are included in the agreement. Add cleaning chemicals to assure food safety and avoid unnecessary wear caused by wrong chemicals. Our consumables are especially developed for our equipment's.

Extended pro-rata warranty

For certain drive components of your Frigoscandia GYRoCOMPACT® we also include an extended pro-rata warranty.

Spare parts discount

Since original spare parts offer the best advantage for your equipment's operation, you'll receive a discount on JBT standard spare parts.

Emergency support

A well maintained machine shouldn't stop, but if it does, we will do our utmost to get you up and running again. Phone support during business hours is included, as well as remote support via HMI access for connected equipment, and emergency call out options can be included.

Emergency parts on local stock

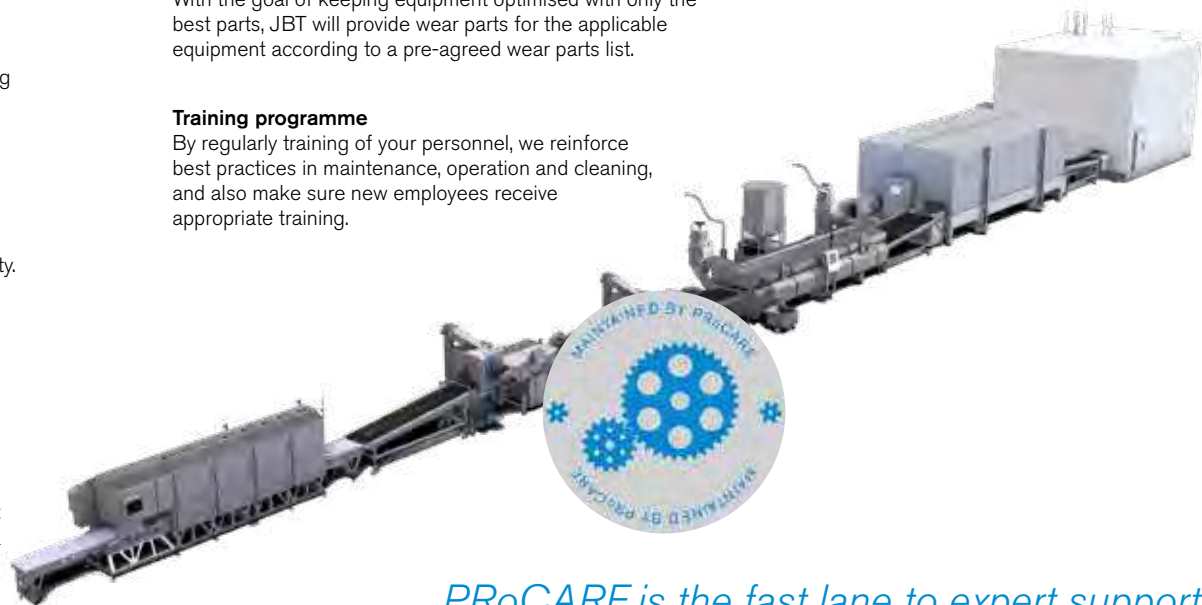
We will compile and review an emergency parts kit to support you and your need for production uptime in the best way possible.

Original wear parts

With the goal of keeping equipment optimised with only the best parts, JBT will provide wear parts for the applicable equipment according to a pre-agreed wear parts list.

Training programme

By regularly training of your personnel, we reinforce best practices in maintenance, operation and cleaning, and also make sure new employees receive appropriate training.



PRoCARE is the fast lane to expert support

Customer Care

What can we do for you?

Our focus is to assist you in maximising your return on investment by optimising your equipment throughout time and changes. We have a long tradition of working together with our customers to develop optimal solutions in terms of production, cost and processed food quality. Our expert team is spread over EMEA and understands your needs. Ready to serve you at short notice, whether your need is technical service, application adjustments or help with food safety improvement or productivity solutions. As a valued JBT customer, you always have a team of skilled customer support and service people ready to help.

Spare Parts

We are committed to providing OEM quality parts and service. No matter the age of your equipment, we do our utmost to identify and fulfil your specific spare parts needs and provide you with the latest technology. If you want guaranteed results there really is no substitute.

Upgrade Kits for optimised ROI

As your product range changes, or as production grows, your existing equipment is not always perfectly suited to give you the best throughput, quality or food safety. We understand clearly what you need – to get the most from your equipment, and even to enhance its performance.

Our upgrade kits are complete tailored original component packages, that deliver cost-effective, quality results. Quick installation, commissioning and operator training by our skilled service teams help you maximize your return on investment.

Relocations

Perhaps you've bought new equipment and no longer need your old – or at least not where it is today. No problem! We help you to modernize and move your equipment to a new location.

And when you no longer need it, it may still have a value to someone else.



Customer Care Parts and Service



Certified is safer

For the safety and convenience of our customers we offer certified products for cleaning and maintaining your equipment. By using JBT Certified cleaning agents and lubricants you are ensured to get the best suited products, customized to fulfil your needs and prolong the lifespan of your investment.

Formula Family Lubricants

The Formula family is developed to answer the stringent food safety requirements and temperature extremes of the food processing industry. Tested and proven under the most severe operating conditions, Formula lubricants support safe, smooth operation and maximised operating uptime with the perfect cocktail of pour point and viscosity.

Each of our environmental-friendly food-grade lubricants is specifically developed to perform a specific task, and is available in a range of containers and volumes to match your production requirements. The lubricants are USDA H1-authorized.

Formula Clean Detergents

When you buy cleaning chemicals from JBT, we don't just sell you a pallet of chemicals, we look at your cleaning process to make sure you use the right mix of cleaning agents and the right dosage, to save on chemical consumption, water and our environment while ensuring food safety.

Choosing the right detergent for your food processing equipment is very important to prevent contamination and bacterial growth.

The Formula Clean® family is developed to fit JBT product lines specifically and to avoid unnecessary wear of the materials in our equipment. Each product of the Formula Clean family has its purpose and special qualities and comes in different containers to fit your needs.

*Ensure you use the right cleaning chemicals
and clean in a correct way!*

Good buy

You know it's not goodbye - it's a good buy

In every aspect in the development of a solution from JBT you can rest assured that great considerations have been taken in regards of sustainability and ethics. When you buy your machinery from JBT you know that it has been developed and manufactured in a responsible way. And you know that you get a piece of equipment that utilises the latest scientific advances in technology to minimise your environmental footprint. But it doesn't end there. Our solutions and processes come with a commitment to constantly improve their impacts in the areas of CSR. Whether it is by developing more energy efficient drive lines, decreasing consumption of water and chemicals or offering training and support to create more sustainable work flows.

Our focus on minimising the environmental footprint of our business does not end with a closed deal on a piece of equipment. We are committed to long-term partnerships with our customers. JBT's customer care services ensure that even old equipment receives high quality maintenance and machine upgrades so that you are getting the most value out of the equipment and realise more operational savings. We offer upgrade kits and solutions that are designed and engineered to maximise operating efficiency while minimising environmental impact.

What's good for you is also good for the environment.





We are your single source for profitable processing solutions

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